ONLINE FAULT DIAGNOSIS METHOD FOR SOLENOID VALVE BASED ON ANALYSIS OF TIME-FREQUENCY DOMAIN CHARACTERISTICS

ABSTRACT OF THE DISCLOSURE

Provided is an online fault diagnosis method for a solenoid valve based on analysis of time-frequency domain characteristics, which relates to the technical field of solenoid valve fault diagnosis. The online fault diagnosis method for a solenoid valve based on analysis of time-frequency domain characteristics includes: acquiring timing current data of a solenoid valve drive end, and performing time domain analysis and frequency domain analysis to obtain time domain and frequency domain feature vectors, respectively, and combining the time domain and frequency domain feature vectors to obtain a complex time-frequency domain feature vector; acquiring a plurality of sets of labeled complex feature vectors by changing an operating state of a solenoid valve and then generating an isolated forest model for evaluation by majority voting; and finally, realizing online diagnosis on a fault mode of the solenoid valve.

FIG.1